CAPITAL IMPROVEMENTS PROGRAM BUDGET WORKSHEET
2015 / 2016
Project Information Sheet

This form MUST be completed for each project requested for funding in the 2015-2016 Capital Budget. Use a separate form for each project, and please prioritize each project 1 through *X*, with 1 representing your highest priority and *X* the lowest.

Department Name:	Water Department Filtration Division
Priority Ranking:	2
Project Title:	East Remote Telemetry Radio System Replacement
Quantity(if applicable):	1
Project Useful Life:	10 -15 Years
Cost Estimates:	Current FY Project Request: $25,000 Prior Funding: $0 Total Project Cost: $25,000
Projected Schedule of Purchase:	Completed by June 30, 2016.
Source of Funding:	Water Fund Reserves
Purpose of Expenditure:	To replace the existing antiquated radio system equipment with more reliable and updated equipment and radio frequency to maintain radio communications between the Water Treatment Plant (WTP) and 6 remote sites.
Project Justification:	The WTP telemetry system has an east and west radio system. The east & west remote telemetry systems communicate with 6 sites each from the WTP. Maintaining communications with these remote sites is critical to maintain operations. Chlorine residuals, tank levels, equipment status, etc is transmitted via the radio system to the WTP. Treatment and operational decisions are made based on the information garnered from these readings. Currently, the WTP experiences numerous daily communication failures with these remote sites based on the existing radio frequency and equipment. The communications equipment at these sites are at least 15 years old and need to be replaced.
Projected Budget Impact:	This project will be funded from Water Fund Reserves. The project makes up 10% of the Water Department Filtration Division CIP budget.

Check those items that apply:

Type of Project:	**X** Equipment	□ Vehicle	□ Project
Status of Request:	**X** New Request	□ Funding Requested in Prior Year	
Status of Item or Project:	**X** Replacing Existing Equipment, Vehicle, Etc. □ Equipment, Vehicle, Etc. that is New to the City		

Please answer the following questions related this request.

1. Has this project been requested previously? If so, when? Was funding awarded? If yes, how much?

This project was not requested in a previous 6 year CIP. No previous funding has been awarded.

2. Description and function of new capital item:

The project includes replacing the existing east remote telemetry radio system equipment and changing to a more reliable radio frequency to maintain communications between the WTP and the 6 remote sites. The remote sites are unmanned such that maintaining communications with these sites is crucial to maintain the water system and operations. Water system data such as chlorine residuals, tank levels, system pressures, equipment status, etc are obtained from the radio system. The function of the upgraded telemetry system is to maintain reliable communications with the water system utilizing more reliable equipment. The west remote telemetry radio system was replaced in 2012.

3. Why is this item needed? Why does the City need to provide this service?

The project is needed to maintain reliable communications with the 6 remote sites on the east remote telemetry system. The WTP currently experiences several communication failures a day from these sites. A communication failure occurs when the WTP loses communications with one, or more of the remote sites. These failures can last between 30 seconds to a few hours. If a communication failure lasts too long, staff needs to be dispatched to check on the site with the failure to investigate and or repair.

4. Explain new or improved service that will result from new item and impact on your department's performance or services provided:

Replacing the communications equipment for the east remote telemetry system and changing radio frequencies will ensure reliable communications between the WTP and the 6 remote sites. The improved service will be less communication failures resulting in less staff time and repair costs.

In 2012, the communications equipment for the South Custer Booster Station (West Remote Telemetry System) was replaced due to excessive communications failures. Since this replacement project has been completed communication failures have not occurred within the with the west telemetry radio system.

5. What will be the operating budget cost or savings? (List costs/savings for personnel, supplies, and other charges separately).

The operational costs for this project will be identical to the existing radio system. The new radio system equipment and frequency will be more reliable than the existing system. The new system will have updated equipment and won't be as prone to communications failures thus requiring call outs. Average savings per year is estimated at $1,000.

6. Does the proposed project comply with the City's Comprehensive Plan?

Yes. Page 49, Chapter 8

Goal #1: Continue to offer the highest quality, most efficient services and facilities for residents.

h. Update infrastructure to accommodate improvements and changes in technology while ensuring the health and safety of the public.

7. Are there other alternatives to the proposed item or request? (E.g., lease vs. buy, repair rather than replace, share with other governmental jurisdictions, etc.)

No.

8. How is the cost proposed to be funded? Are there alternative sources of funding? (E.g., donations, millages, special assessments, grants, etc.)

Water Fund Reserves. No grants or funding assistance is available to make this necessary improvement.

9. Are there opportunities to share costs and services with other governmental units within the region?

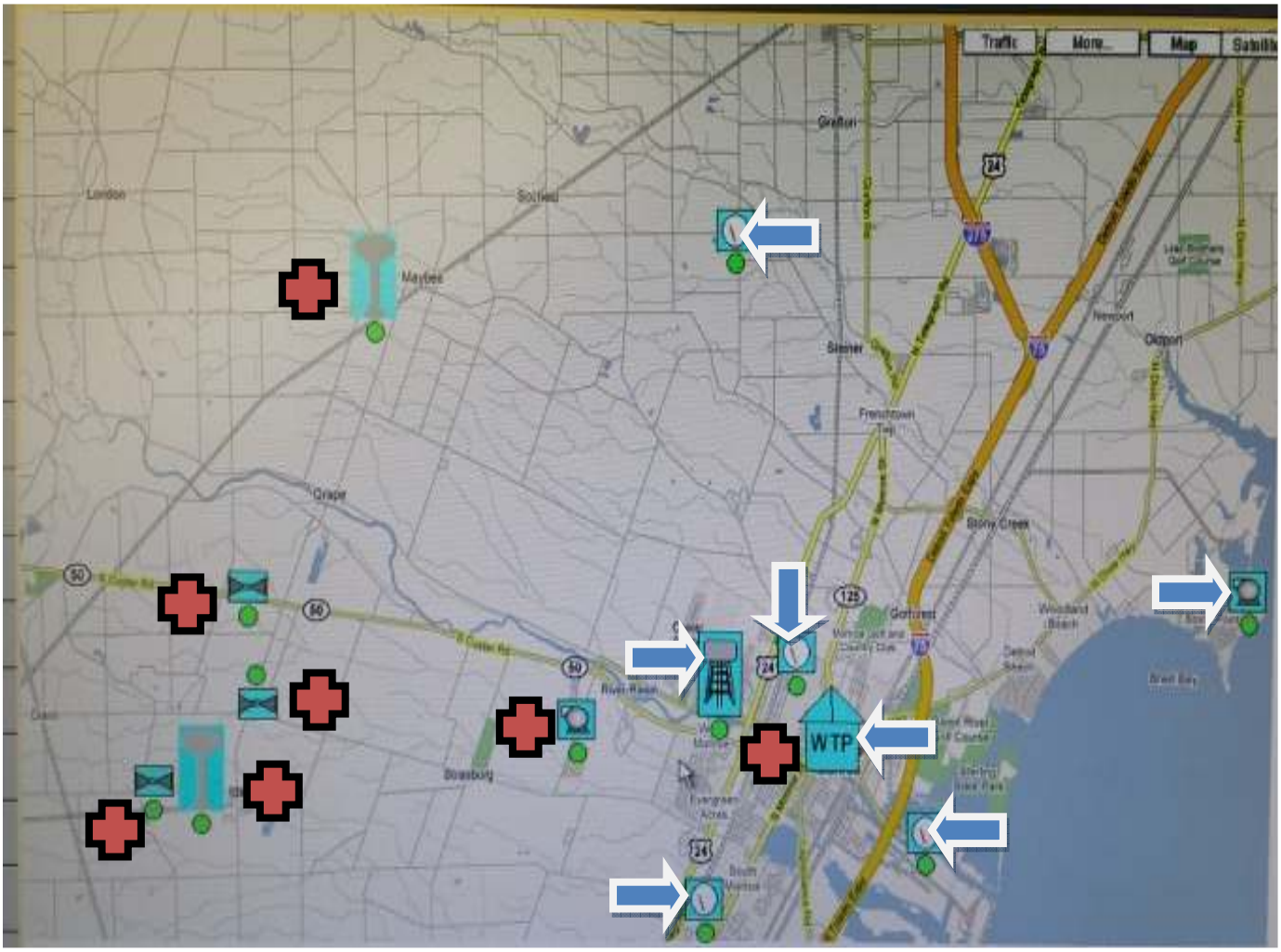
The project cost will be shared by the rate payers within the communities serviced by the water system in accordance with the water rate structure.

10. Insert a photo/drawing, or cut-sheet of the site or equipment if available.

Integra TR Radio Modem Used on East System

Guardian 400 Radio Modem - West System

11. For fixed projects, Include a map of the project location if applicable and/or appropriate.



The SCADA system map showing the remote sites the WTP telemetry systems communicate with. The remote sites marked with the blue arrow are on the East Telemetry System. The remote sites marked with a red arrow are on the West Telemetry System.

<u>East System</u>
Water treatment Plant
Low Service Pump Station
Greenfield Ave Pressure Monitor Station
Aimy Drive pressure Monitor Station
Front Street pressure Monitor Station
Heiss Road Pressure Monitor Station
Roessler Water Tower

<u>West System</u>
Water Treatment Plant
South Custer Booster Station
Dundee Valve Pit
Petersburg Valve Pit
Lewis Avenue Valve Pit
Maybee Water Tower
Ida Water Tower